

ENVIRONMENTAL NEWS



Newsletter of the N.H. Department of Environmental Services

November/December 2007

Governor's Message

The Climate Change Task Force

Climate change is a very real, very serious problem facing our state, our nation and our world. We are already seeing the impact of climate change here in New Hampshire with the increasing intensity of storms, fewer days with snow cover and the earlier spring blooms of some plants,



Governor Lynch

according to University of New Hampshire research.

Left unchecked, climate change could change the natural character of our state – from our fall foliage seasons to winter skiing to spring maple sugaring to summer storms.

I believe our country needs national action and a national policy to address climate change. But I do not believe that New Hampshire can afford to wait for national action. We know how important stopping climate change is to the health of our citizens, the health of our economy, and the health of our environment.

That is why we are dedicating ourselves in New Hampshire to reducing the pollution that causes global warming and climate change. We've already passed the Clean Power Act, and this

Governor, *continued on page 8*

Northeast states call on EPA for stronger mercury controls

In late October, Gov. John Lynch and six other Northeastern governors called on the U.S. Environmental Protection Agency to reduce harmful mercury pollution blowing into the region from coal-fired power plants in the Midwest and other areas of the country.

The New England states and New York jointly submitted to EPA a cleanup plan, called the "Northeast Regional Mercury Total Maximum Daily Load" (TMDL), which continues to implement the states' Mercury Action Plans, and calls on EPA to require other states to take similar steps to reduce mercury emissions. The states say that under the Clean Water Act and the Clean Air Act, EPA has both the authority and the obligation to act to require other states to reduce mercury emissions.

Despite the Northeastern states' aggressive efforts to reduce mercury pollution, greater than 70 percent of the mercury impacting New England comes

Mercury TMDL, *continued on page 8*

River cleaner at former gas plant

Tires. Lots of tires. An engine block. Railroad ties. Even a sunken bridge. These are some of the items KeySpan recently dredged from the contaminated sediments of the Merrimack River in Manchester as part of its remedial plan for the former manufactured gas plant (MGP) where gas was produced primarily from coal and oil. The main waste product of this type of gas production was coal tar, which contains various contaminants harmful to the environment and public health. As is typical, this coal tar ended up in river sediment.

KeySpan began dredging in May 2007 after completion of ex-

River Dredging
continued on page 7



Approximately 10,000 cubic yards of sediment are expected to be removed from the Merrimack River in Manchester by the time the project is completed at the end of this year.

Regional Greenhouse Gas Initiative moves forward

Over the next few months, you are likely to hear and read about the Regional Greenhouse Gas Initiative (RGGI). The roots of this legislation date back to a 2001 resolution adopted jointly by the New England Governors and Eastern Canadian Province Premiers to work together to address global warming. The New Hampshire Legislature this year is poised to consider legislation to implement a RGGI memorandum of understanding (MOU) to establish a carbon dioxide emissions "cap and trade" program for fossil-fueled electric power plants.

The MOU is a regional agreement signed by the Governors of New Hampshire, Maine, Vermont, Connecticut, Maryland, Massachusetts, Rhode Island, New York, New Jersey and Delaware, whereby each state agreed to pursue adoption of its own regulations and laws to implement a flexible, market-based program to reduce carbon dioxide emissions – a major cause of global warming – from power plants in these states.

The RGGI agreement sets a regional carbon dioxide emissions cap (or limit) of 188 million tons annually for the largest power plants (greater than 25 megawatts) from 2009 to 2014. The regional cap represents the projected emissions for 2009, the start year of the program. The emissions cap will then be reduced by 2.5 percent per year through 2018, for a total reduction of 10 percent by 2019.

In the cap and trade program, each state is apportioned allowances (one allowance equals one ton of carbon dioxide) based on its relative emissions which are attributable to the regulated power plants in that state. New Hampshire will be apportioned 8.6 million allowances. The power plants must have enough allowances

to cover their emissions, and may purchase, or "trade," emission reductions from other power plants or from developers of projects that achieve greater greenhouse gas reductions.

A major benefit of the RGGI program is the flexibility it provides to the states for increasing energy efficiency and promoting new, clean energy technologies.

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proceeds in energy efficiency or clean energy technologies. An economic study recently conducted by the University of New Hampshire has shown that this option provides the greatest long-term economic benefit to New Hampshire rate payers.

New Hampshire and the other Northeastern and Mid-Atlantic states recognize that they must act now to do something about global warming. A strong consensus exists within the scientific community that the earth is warming as a result of emissions of carbon dioxide and other greenhouse gases that are produced by human activities such as the burning of fossil fuels (coal, oil, natural gas) for energy and changes in land development.

Research by the University of New Hampshire shows that New Hampshire is already experiencing impacts from global warming, such as in-

creased average summer and winter temperatures, less snow cover, earlier river ice-out and spring high flow, and greater frequency of intense rain events. In fact, New Hampshire has experienced three 100-year flood events in two years, resulting in over \$35 million in damages to roads, bridges, and private property.

The 2007 Northeast Climate Impacts Assessment has predicted that in the Northeast, by late in the century, warmer winters will shorten the average ski seasons and the snowmobile season will be marginal to non-existent. The number of days over 90°F in many of the region's cities, such as Concord, are expected to triple. These impacts will affect many aspects of our economy including our forest industry and tourism, and additional significant infrastructure costs for our cities and towns. Increased summer high temperatures exacerbate air pollution and create health concerns for

Commissioner, *continued on page 8*

ENVIRONMENTAL NEWS

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Governor's Award for Pollution Prevention winners

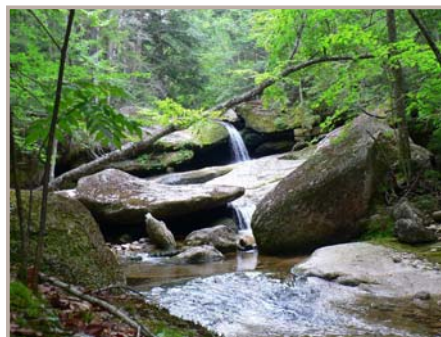


NH Ball Bearing representatives receiving award from Gov. Lynch (2nd from right) and DES Commissioner Burack (right).



Representatives from PSNH display their award with Gov. Lynch (3rd from right) and DES Commissioner Burack (right).

DES 20th Anniversary Commemorative Posters



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New Hampshire joins largest Clean Air settlement

New Hampshire has joined with the federal government, states and environmental groups in recommending court approval of a settlement of Clean Air Act violations that will result in the largest emissions reductions in history with one of the nation's largest utilities, American Electric Power Inc. (AEP). The settlement, if approved by the court, would result in massive reductions of air pollution from Midwestern coal-fired power plants that have degraded New Hampshire's air quality.

The settlement culminates seven years of litigation with AEP over alleged violations of "New Source Review" or "NSR" provisions of the federal Clean Air Act. The NSR provi-

sions require power plants to upgrade pollution controls when they make any major changes that would increase air emissions. The governments and environmental groups filed suit against AEP in Ohio, alleging that AEP had constructed life extension projects at many of its coal-fired plants without controlling increased pollution levels, resulting in acid rain and smog in downwind areas. New Hampshire, along with seven other northeastern states, EPA and several environmental groups have been engaged in intensive settlement discussions while awaiting a court decision on liability for the alleged violations.

The proposed settlement, which was filed in federal court in early Oc-

tober, would require AEP to eliminate hundreds of thousands of tons of air pollution from 16 coal-fired power plants located in Indiana, Kentucky, Ohio, Virginia and West Virginia. It would also require AEP to pay a \$15 million civil penalty to the federal government and to fund \$60 million worth of environmental projects. Pollution control equipment alone could cost AEP as much as \$4.6 billion dollars.

"The benefits from this settlement will continue for years to come as we move forward to address state and regional air quality problems," said DES Commissioner Tom Burack. "DES will continue to work with its state and federal partners to ensure that this progress continues." ■

Councilor Burton tours district with DES Commissioner

From brownfields to blue lakes and green projects



Executive councilor Ray Burton (second from right) and DES Commissioner Tom Burack (right) meet with the Lake Sunapee Protective Association on a recent tour of the councilor's district.



The pedestrian bridge project, which was visited during the tour, is part of the mill redevelopment that is underway in Claremont using Brownfields assessment funding.

Homeowners included in mercury-added products disposal rules

House Bill 416, passed in the 2007 legislative session, bans the disposal of all products containing intentionally-added mercury in landfills, transfer stations and incinerators, regardless of the amount of mercury they contain. Mercury is a persistent, toxic chemical that does not break down and should not be discharged to the environment. The ban includes such things as thermometers, thermostats, electrical switches and relays, mercury button cell batteries and fluorescent light bulbs, including compact fluorescent bulbs and any larger products that contain these items (unless the mercury part is removed first). Homeowners and businesses alike are affected by the ban.

Legal disposal options include bringing them to a designated collection program, e.g., homeowners can bring spent bulbs to a participating TrueValue hardware store or a household hazardous waste collection event. In addition, some 29 municipalities currently collect and recycle a variety of mercury-added products, while an additional 31 communities will accept spent lamps only.

Additional provisions were passed in HB 907 that prohibit the sale of many mercury-added products in the state, including thermometers and other measuring devices, switches, relays and thermostats. The sales prohibition on the first "wave" of products, mainly measuring devices, will take effect on January 1, 2008. Switches, relays and thermostats sales will be restricted as of July 1, 2008. This DES-requested bill was first introduced in the 2000 session, so its passage marks several years of work and brings the state more in line with the other states in the region.

For a more comprehensive list of common mercury-added products, visit the N.H. Pollution Prevention Program website at www.des.nh.gov/nhppp/Mercury/HgProducts.asp, and for a list of household hazardous waste collection events and options for proper product recycling, go to www.des.nh.gov/HHW/, or contact your local solid waste facility. For more information, contact Paul Lockwood at (603) 271-2956 or plockwood@des.state.nh.us. ■



Councilor Burton and Commissioner Burack meet with the Claremont wastewater treatment plant operator to discuss a \$2.2 million upgrade project.



The Burton/DES tour stops at the Meadow Roads Realty Trust property in Newport. An 18th century mill structure is being redeveloped into senior housing with the help of DES, HUD and Southwest Community Services.

Asbestos enforcement action includes educational component

Recent action was taken by DES and the Attorney General's Office against Kane Management Group, LLC and 85 Industrial Park II, LLC for the improper removal of asbestos from an industrial building in Dover. This action demonstrates continued efforts by DES to protect public health and the environment from asbestos contamination.

Under the terms of a settlement agreement, Kane will pay \$90,000 in civil penalties, \$10,000 of which will fund air pollution and climate change education and outreach projects at the Seacoast Science Center in Rye. The outreach projects will include creation of a visitor air quality program that relates to and enhances an existing air quality exhibit at the Science Center. The new program will be an interactive, hands-on approach for learning about how weather, air pollution, and climate change are measured and related to each other.

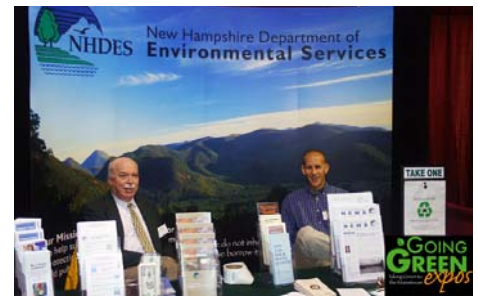
The action against Kane resulted because Kane hired unlicensed workers to remove asbestos-containing flooring as part of an August 2002 renovation project in the Dover property. State law requires that licensed abatement contractors be hired to remove asbestos and that DES be notified before any asbestos removal begins. After confirming that Kane had hired an unlicensed demolition company and had failed to notify the state, DES required the project to be completed by a licensed abatement contractor.

"Property owners and building contractors should conduct an asbestos survey before starting any renovation

or demolition work," commented DES Assistant Commissioner Mike Walls. "If asbestos is present, it should be removed by trained and licensed abatement contractors. These requirements are meant to prevent release of asbestos fibers into the environment and the exposure of unprotected workers to asbestos-contaminated material." Walls added that DES is pleased that the settlement with Kane includes an educational benefit as part of the monetary penalty. ■

DES partners with Shaw's to clarify fish consumption message

The New Hampshire Department of Environmental Services is working with Shaw's Supermarkets across the state to help pregnant women make the right choices when buying fish for themselves and their children. Due to confusion about the mercury warnings and fish consumption, many people including some pregnant women have decided that it is safer to avoid eating fish. DES felt there was a need to correct the risk perception regarding mercury and fish consumption. DES urges the public to "eat healthy fish" in moderation rather than eliminating fish from their diet. Shaw's Supermarket has agreed to display a poster at their fish counters throughout the state, which will help women to make the right choices when buying fish. The posters highlight which fish are the best to eat and how much of each kind to eat. It also highlights which fish to avoid due to their high levels of mercury. ■



Tim Drew, Public Information and Permitting, and Dave Degler, Solid Waste Management, fielded questions at the Going Green Expo held recently in Manchester. DES urged expo attendees to "take the DES Pledge" for a greener environment over the next year. For more information on the pledge, go to www.des.nh.gov/pledge/.



Dennis Kwider, Shaw's director of food safety and sanitation and DES Commissioner Tom Burack recently announced a joint effort to display posters declaring "Fish is part of a Healthy Diet."



Shaw's Supermarkets now have "healthy diet" posters on display in its fish department.

www.des.nh.gov

Salt brine proving itself on I-93

A cost effective anti-icing treatment that reduces overall salt use

In its constant search for anti-icing products that can be both environmentally friendly and cost-efficient, the New Hampshire Department of Transportation (NHDOT) turned in early 2005 to an old standby, salt (sodium chloride), in a different form. For the past two winters, salt brine has been used to pre-treat Interstate 93 from Salem to Manchester and sections of Route 101 around the Manchester area.

Salt brine is a liquid solution of water and approximately 2.5 pounds of dissolved salt per gallon. The brine is made in a Londonderry patrol facility, then loaded into truck tanks or trailers equipped with spray nozzles to dispense the brine.

The appeal of using salt brine is that it can be used to proactively pre-treat roads *before* a storm when it can adhere to the road surface, instead of bouncing off like rock salt, and prevent the kind of slipping and sliding motorists can face in winter conditions.

"It acts like Teflon and keeps snow from sticking to the pavement," says Steve Gray, the retired NHDOT highway engineer who has more than three decades of experience in winter maintenance.

"It takes six times as much salt to attack snow pack or ice on the roads from the top down as it does from the bottom up," Gray says. He adds that salt brine has the residual effect of providing ongoing anti-icing effectiveness by staying on the pavement for several days.

Salt in its granular form must create brine by absorbing moisture from the snow before it can start to work. When using salt brine, the reaction time is reduced as it's already in liquid form.

Salt brine also cuts down significantly on the amount of salt required to treat a road, an important factor along the I-93 corridor. The 60 gallons of salt brine required per lane-mile for treatment reduces the normal 250 pounds of rock salt required per lane-mile by 100 pounds. The estimated cost to produce a gallon of salt brine is just six cents, compared, for example, to approximately 88 cents a gallon for an alternate anti-icing product, calcium chloride.

The \$480,000 salt brine initiative in New Hampshire included a new building, pumps and mixing tanks, four plow trucks equipped with three thousand gallon brine



tanks and underbody plows, and two trailers that are also used for dispensing salt brine.

The effectiveness of salt brine has been proven in other states. In Iowa, snowplow operators have reported quicker melting with the pre-wetting process, which means better service and safer roads for the motorist, with salt savings providing quick returns on the investment.

After two winters of trials in New Hampshire, it's still too soon to declare the brine experiment an unqualified success. While a better level of service has been experienced at times, especially at the onset of storms, results have also shown the brine can only be used in very specific weather circumstances, which can limit its overall effectiveness. ■

2007 air quality wrap-up

During the 2007 summer ozone, New Hampshire experienced an increase in the number of poor air quality days. Based on preliminary data collected by DES between May and September, there were six days when ozone monitors recorded concentrations above healthy levels, compared to two unhealthy ozone days in 2006. Throughout New England, there were 26 unhealthy days this season, compared to 16 in 2006.

Concentrations of ground-level ozone, the main ingredient of smog, are considered unhealthy when they exceed 80 parts per billion over an 8-hour period. The highest reading this summer was 97 ppb recorded at Odiorne State Park in Rye on August 3.

Pollution transported into the state from our south and west is the main cause of elevated ozone levels in New Hampshire. This season's increase in number of unhealthy ozone levels is also directly related to high temperatures, since strong sunlight and hot weather increase the production of ground-level ozone. Nashua recorded 20 days above 90 degrees this summer, compared to only 13 days in 2006.

The good news is that despite the increase in 2007, over the long-term New England has experienced a decreasing number of ozone days over the past 30 years. ■



2006 municipal recycling rates

DES recently released the 2006 solid waste recycling rates for all New Hampshire municipalities, which averaged 20.6 percent overall. Municipal solid waste budgets total over \$100 million for the state, and the per capita expense to dispose of solid waste is approximately \$77.

Increasing recycling rates can have a beneficial effect on town budgets. DES estimates that a town's total budget could be reduced by \$1 million for every 1 percent increase in the rate. Municipalities can increase recycling by educating their residents in effective recycling and by instituting incentive programs such as pay-as-you-throw. Towns should also encourage their residents to participate in household hazardous waste diversion programs in order to prevent hazardous materials from being sent to landfills and incinerators.

Among the towns that have high recycling rates are Lancaster and Littleton, both of which have pay-as-you-throw programs. There are 46 towns in the state that have pay-as-you-throw in place, and another 112 have some form of charge for special items such as furniture, appliances or electronics.

The report is available on the DES website at www.des.nh.gov/SWTAS/pdf/rec_mun.pdf. For more information about the report, please contact Don Maurer at (603) 271-3713. ■

River Dredging

continued from page 1

tensive investigations within the river, which involved drilling from barges, an ecological risk assessment, a mussel survey and deployment of scuba divers to mark and cut debris. The investigations identified an area of approximately 59,000 square feet of contaminated sediment for removal and approximately 10,000 cubic yards of sediment are expected to be removed by the time the project is completed in December 2007. Dredged sediment is off-loaded and processed at the former Jac Pac Foods property nearby and subsequently shipped off site for treatment at a thermal desorption facility. Once dredging is finished, a multilayer stone cap will be placed over the area, enabling full use of the river once again.

DES project manager Mike McCluskey stated that "DES considers the completion of the dredging work an important phase of the remedial action plan. The success of the project has in large measure been due the combined efforts of many parties working together."

Planning for the project required months of communication and coordination with numerous and diverse stakeholders, including: the City of Manchester, adjacent property owners, NH Fish and Game, US Fish and Wildlife Service, the Lower Merrimack River Local Advisory Committee and several programs at DES. The project was designed around fish spawning, eagle habitat, pedestrian access to the adjacent river walk, concurrent construction of the Hands Across



the Merrimack Bridge above the dredge area, and recreational users of the river.

"It took a lot of patience, negotiation and compromise to get all stakeholders on board with the project. But in the end, we went

from permitting to construction in less than six months and I think everyone recognized that the short term inconvenience was worth the longer term environmental benefits, both to the Merrimack River and the residents of Manchester," said KeySpan project manager Tricia Haederle. ■

What's on your plate?

Support conservation by purchasing a moose plate for your vehicles. The proceeds benefit natural resource programs in the state, including LCHIP, wildlife programs, state parks, and the State Conservation Committee's conservation grants program. The State Conservation Committee is a state agency made up of representatives of the ten county conservation districts and state natural resource agencies, including DES. ■



Governor

continued from page 1

year I signed the Renewable Energy Act, which will help us reach our goal of ensuring that 25 percent of our energy comes from renewable sources by 2025. And now I am creating by Executive Order a Climate Change Task Force for New Hampshire.

The Executive Order establishes a task force charged with creating a Climate Change Action Plan for the State of New Hampshire. This task force will examine how climate change is affecting the State of New Hampshire, and recommend goals for emissions reduction and steps that we can take to meet those goals and cut our emissions. The task force will report back to me by August 1, 2008.

You can see the commitment to reducing the emissions that cause global warming across New Hampshire. The city of Keene is using biodiesel in city vehicles. The University of New Hampshire is constructing a pipeline to the Turnkey Landfill in Rochester so methane gas produced naturally from the decomposition of trash at the landfill can be burned in the campus power plant.

In addition to the task force, I also will be working this year to pass legislation to implement the Regional Greenhouse Gas Initiative in New Hampshire. I joined with Governors across the Northeast to create this effort, which will set caps on emissions from power plants across the region. By creating and joining RGGI, the Northeast states are setting a national example on how to reduce the emissions that cause climate change.

We have acted to better protect New Hampshire's environment and I look forward to working with lawmakers and the Department of Environmental Services to help ensure we continue to lead nationally on the issue of climate change.

Gov. John Lynch

Commissioner

continued from page 2

our citizens, especially children, the elderly, and those with respiratory ailments.

The New Hampshire RGGI legislation has been carefully crafted through a stakeholder process that included legislators, ratepayers, the environmental community, the healthcare community, businesses, and electricity producers. We look forward to working with all interested parties to enact RGGI and reduce carbon dioxide emissions from our power plants, while maintaining energy affordability and reliability here in New Hampshire.

Thomas Burack, *Commissioner*



DES Commissioner Tom Burack, EPA Regional Administrator Bob Varney, Executive Councilor Ray Burton, InnSeason Resorts President Dennis Ducharme, representatives from the congressional delegation, state and local officials gathered recently in Lincoln to celebrate a Brownfields "success story" at the site of the former Franconia Paper Mill.

Mercury TMDL

continued from page 1

from pollution in upwind states. Downwind states such as New Hampshire will not be able to solve this problem without better federal regulations.

"The New England States and New York are sending a message loud and clear to the federal government that we need their help to fulfill our collective goal of virtually eliminating mercury pollution from our lakes and ponds. Given that more than 70 percent of the mercury that reaches New Hampshire and the region comes from upwind air pollution sources, stronger federal regulations combined with our local source reduction initiatives will be paramount to our success," said DES Commissioner Tom Burack.

Under the provisions of the Clean Water Act, EPA has 30 days from the states' submittal to either approve the plan or disapprove it and set its own limits. ■



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